

condition. For the examination and description of these collections I wish to employ the younger scientific men of eminence in our country, and as the most of them cannot without too great a sacrifice undertake year-long labours more or less foreign to their proper employment, I have made an application to the Government for a grant of 10,000 crowns (about 550*l.*) to defray the expense of working up the collections. If this application be granted, and the collections of the expedition of 1875 thus become not a dead museum-material, but fructify for the purposes of science, I hope that the sea visited by the expedition, formerly almost unknown, will soon be reckoned among those of our globe which are well known in respect of their natural history.

Part of these scientific researches besides concern purely practical questions, and I shall therefore, as they are concluded, give you a short account of them.

A. E. NORDENSKJÖLD

*ON THE SPECTRUM OF NITROGEN AND THAT OF ALKALINE METALS IN GEISSLER TUBES, BY M. SALET*

IN 1872 Mr. Schuster published the important statement that "nitrogen, heated in a Geissler tube with metallic sodium, ceased to give the characteristic channelled spectrum." He described the bright lines he got in this case, and attributed them to pure nitrogen, considering the band spectrum to be that of an oxide of nitrogen, a compound destroyed by the alkaline metal. These conclusions were afterwards disputed, for, in repetition of the experiments, the channelled spectra were seen to disappear after action of the sodium, but they were replaced by various spectra, none of which belonged to nitrogen; so that, after its purification, this gas could not be detected by prismatic analysis. The chemical compound really formed by the action of oxygen on nitrogen is (as M. Salet pointed out) peroxide of nitrogen, a very stable substance, whose spectrum does not coincide with that, the appearance of which is to be explained.

In a recent note to the French Academy, M. Salet affirms (1) that the channelled spectrum may be produced with nitrogen heated in contact with sodium; (2) that the disappearance of the nitrogen spectrum is due to that of the nitrogen itself, which is entirely absorbed by the sodium under the influence of the electric discharge; (3) that the spectrum described by Mr. Schuster may probably be attributed to vapours of the alkaline metal.

He describes some of his more decisive experiments. A closed tube of hard glass was procured, 12 cm. long and 2 cm. in diameter; at one end were introduced two aluminium electrodes, about 1 cm. apart; to the other end was soldered a tubule with an enlarged part, into which was put a small piece of sodium, then the tubule soldered to the mercury pump. A vacuum having been made, the sodium was heated; it swelled and boiled, parting with hydrogen; the swelling at length ceased, and at a higher temperature the sodium was slowly volatilised. Then the apparatus was separated from the pump, with the blowpipe; and the bright liquid and globule of sodium was brought into the tube. After cooling, the enlarged part was separated, and the tube directly fused on to the pump. Then exhaustion was recommended, and the sodium volatilised, care being taken that the condensation of the metallic vapour occurred only in the half of the tube not holding the electrodes; and nitrogen, pure and dry, was then admitted. A vacuum was produced anew three times with the nitrogen, the alkaline metal being volatilised each time. Lastly, the apparatus was closed, having a pressure of about 5 mm. It was now possible to fuse the globules, unite them, and volatilise them afresh a dozen times in contact with the same mass of gas, without the appearance of the spark between the electrodes being in the least degree modified. The Holtz machine was used, or an induction coil with a Leyden jar; the interpolar space was roseate violet, and gave the channelled spectrum with the greatest distinctness. When the disruptive spark of the Holtz machine is employed, the jet of roseate violet light giving the channelled spectrum is instantaneous, as can be shown by a simple method (which M. Salet described). By volatilisation the sodium may easily be brought to the neighbourhood of the electrode. If there appears in the form of brilliant globules of a very pure silver white; but if the tube be set in action, the portions subjected to the action of the luminous discharge are at once tarnished. The metallic surface quite disappears, and is replaced by a brownish black. At the

same time one sees in the appearance of the electric jet changes produced which are caused by a greater rarefaction. If the surface of the sodium be renewed the action continues, and the spectrum of nitrogen presently quite disappears; the light is yellowish, and due, for the most part, to sodium; there are, in general, slight impurities (from the electrodes and glass), which give some strange lines.

M. Salet made a direct experiment to show this absorption of nitrogen by sodium under the influence of electricity. He made a tube like the one that has been described, but bearing a truncated barometer; and introduced nitrogen at a pressure of 27 mm. The absorption of the gas was sufficient for one to be able to follow with the eye the ascent of the mercurial column. After a few minutes, having twice renewed the surface of the sodium, no difference could be perceived between the mercury surfaces in the two branches of the manometer.

The author also sought to characterise this absorption chemically. He broke a tube and treated separately with water a portion of the sodium remaining bright and a portion of the sodium altered by electricity. Into the solution he poured Nessler's test. One of the two liquids was strongly coloured yellow; it was that containing the altered sodium, the other was not altered in aspect. There was formed, then, under the influence of electricity, nitride of sodium decomposable by water with production of ammonia. This body is formed only at a temperature higher than red, like nitride of magnesium; or even is not produced directly at any degree of heat, like ammonia. M. Salet proposes to prepare and analyse it.

*NOTES*

WE hear with regret that the publications of the Geological Survey of the Territories by Prof. Hayden are likely to be stopped by the partisans of rigid economy in the U.S. House of Representatives. If this step be carried out it will be a serious loss to the scientific men of Europe, as well as of America. The discoveries which have been made by the staff under Prof. Hayden's direction are of the highest value, both from a scientific and a commercial point of view, and the liberality with which they have been circulated in Europe by the American Government has earned the gratitude of all who care for the advancement of knowledge. We trust that the rumour is untrue. If it be true, we hope that a voice of remonstrance will go forth from Europe. The possibility of a political change putting an end to a great national work like that of Prof. Hayden illustrates one of the worst flaws in the American Constitution, the cancelling of all Government appointments at the election of a new president.

M. LEVERRIER was not present at the Anniversary Meeting of the Astronomical Society to receive the medal which for a second time has been awarded him for his valuable Planetary Tables. Ill-health, caused by his recent great labours, was, we believe, the cause of his absence.

THE Annual Address of the President of the Geological Society will be given at the Anniversary Meeting to-morrow.

WE are gratified by the statement contained in the Queen's Speech, that the Government intend to introduce, in the course of the session, measures relating to Primary Education and the Universities. An important article on the subject appeared in Monday's *Daily News*, in which the defects of the present constitution of our Universities are forcibly pointed out. It is also shown how important a bearing the composition of the Commission would have in the character of its work, and that it would be but a proper act of deference to the valuable labours of the Science Commission if the new commissioners numbered some eminent representatives of science. What the direction of the proposed University reforms is likely to be may be to some extent gathered from the "inspired" hint dropped by the Dean of Christ Church, on Tuesday, in connection with the proposal to retain the services of Prof. Max Müller for Oxford. The Dean was authorised to state that

the Government "Universities" Bill would constitute an Executive Commission with powers to receive schemes from Colleges, and base upon them the new University and Collegiate organisation. We shall deal at length with this important subject at the proper time.

WE hear a rumour—which we think not unlikely to strengthen into a more certain sound—that the scheme for removing the Oxford Botanic Garden from its present historical and picturesque site to the bleak and arid "parks," has fallen through, and that immediate steps are to be taken to put the existing establishment on an efficient footing.

THE *Times*' correspondent, telegraphing from Rome on Tuesday, states that the Working Committee appointed by the Italian Government to act in concert with the General Committee in London for carrying into effect the exhibition of a loan collection of scientific instruments, to be opened at South Kensington in April next, have just addressed a circular to the various scientific institutions and individual *savans* throughout the country. It informs them that His Majesty's Government ardently desires that Italy should also take part in the Exhibition, and requests them to examine what instruments in their collections may be most worthy of being exhibited. It especially calls their attention to instruments of an historic character, and to those which have been constructed and principally applied in Italy. In the case of important instruments, of which the use cannot be dispensed with for the length of time the Exhibition may remain open, or which are of too fragile or too delicate a description to incur the risk of transport, but which, from their novelty or perfection, merit being brought before the notice of scientific men through this Exhibition, the Committee request that models and photographs of not too small a size may be sent. These models and photographs are to be made at the expense of the institution or persons exhibiting, but in cases where they may not be able to support the expense, the Committee, in proportion to the importance of the instruments, will supply the means from a fund set apart for the purpose by the Minister of Public Instruction. The Committee suggest that especial regard should be had to the quality and interest of the objects sent, rather than to the quantity.

A SUPPOSED error in the determination of the date when Easter Sunday should fall in the present year has been made the subject of communications to various metropolitan and provincial journals. We shall enter more fully into this question next week; meanwhile it may be stated that the presumed error is an imaginary one, according to the strict methods for ascertaining the date of Easter Sunday, which is correctly fixed by our almanacs to the 16th of April.

A COMMITTEE has been formed at the Hague for the purpose of organising a movement to erect a statue in that city to Spinoza, the 200th anniversary of whose death occurs this month next year. Foreign committees have also been formed, and among the members of the English committee are Professors Bain, Huxley, Jowett, Max Müller, Tyndall, Principal Tulloch, Messrs. G. H. Lewes and Herbert Spencer. Committees have also been formed in Germany, Austria, Belgium, the United States, Finland, France, Italy, and Switzerland. We do not require to say anything in favour of this movement; now that the matter has been mooted it seems surprising that nothing of this kind has hitherto been done to honour the memory of one of the greatest, purest, and most cosmopolitan of philosophers. The movement only requires to be widely known to meet with adequate practical support; many who may differ seriously from Spinoza's philosophy will be glad of an opportunity to show their appreciation of a great, courageous, and disinterested thinker. The treasurer is Mr. A. W. Jacobson, the Hague, the president being Dr. M. F. A. G. Campbell, of the same place,

As regards our note in a former number on the Obi Expedition, we find that Dr. Finsch, of Bremen, whom we spoke of as about to accompany it, will himself be the conductor of it, and will be assisted by Dr. Brehm and Count Waldburg-Zeil, also the well-known microscopist Oscar Schmidt, of Strasburg. The Expedition is organised and sent out by the Verein für Deutsche Nordpolarfahrt in Bremen, and will proceed overland *via* Semipalatinsk and the Altai. It is expected to return late in the autumn.

WE are much pleased to see that Mr. E. L. Layard is gazetted to the Consulship of New Caledonia. In spite of the enormous pressure of business upon him during the late transfer of government in the Fiji Islands, Mr. Layard has managed to do a considerable amount of scientific work there; he has sent home large collections of birds, as well as several valuable papers.

WE have received a copy of the Statement by the Committee appointed by the British Association for the Advancement of Science for the purpose of continuing the investigation on the desirability of establishing a "close time" for the preservation of indigenous animals. Of the indirect and direct causes which tend to reduce the numbers of the Wild Fowl, which the "Statement" mostly concerns, the control of the latter of these causes forms its substance. It is shown that the ineffectual working of the "Wild Birds' Protection Act" depends on the insufficiency of the penalties imposed, the market value of Wild Fowl being high. It is also shown that as those who employ their time in the pursuit of these birds are in the habit of taking out a gun licence and of refraining from exercising their calling in certain waters and over certain lands, therefore they fully realise the nature of restraint, and would be willing—the better class of them, at least—gladly to recognise the propriety of a well-considered and stringent measure, which by effectually protecting Wild Fowl during the breeding season would secure to them a greater abundance at other times of the year. Whilst considering the protection of small birds as of minor importance, the Committee are of opinion that some steps for the regulation of bird-catchers might well be taken.

AT a congregation of Cambridge University on Feb. 3 the following grace passed the senate:—"That a grant of 50*l.* be made from the Worts Travelling Scholars' Fund to William Bridge, B.A., of Trinity College, to enable him to visit Naples, for the purpose of using Dr. Dohrn's Zoological Station, and making researches in Natural History, on the understanding that specimens be sent by him to the University, accompanied by reports which may be hereafter published."

AT the Royal Geographical Society on Monday last, Sir Henry Rawlinson intimated that Lieut. Cameron had solved the difficulty with regard to his followers, by purchasing a vessel at Loando for 1,000*l.*, in which they sailed early in January for the East Coast of Africa. By last accounts the explorer was still at Loando, whence he was to sail by the next steamer for Madeira. At the same meeting the Diary of the late Mr. Margary, from Hankow to Ta-li-fu, was read.

THE Council of the Society of Arts have appointed Mr. H. Trueman Wood as Assistant Secretary, under Mr. P. Le Neve Foster, Secretary of the Society. Mr. Wood has been for the last three years the editor of the Society's journal.

THE Senatus of the University of St. Andrews have conferred the degree of LL.D. on Mr. James Stuart, M.A., Professor of Mechanism and Applied Mechanics in Cambridge University, and on Mr. James Croll, of H.M. Geological Survey.

WE hear that ten days after the attempted ascent of Mont Blanc, noticed in our last number, an American lady ascended not only to the Grand Mulets, but to the summit itself, when

the temperature was — 25°. She reached the top on Jan. 31 at three o'clock in the afternoon, when the sun lighted up an immense panorama. The thermometer marked at the Grand Mulets — 13° and the Grand Plateau — 19°. The lady had with her several guides, and slept at the Grand Mulets on the evening of Jan. 31, returning by La Vallée on Feb. 1. She was enthusiastically welcomed by the inhabitants of Chamonix.

ONE of the Exhibitions granted to Cambridge University by the Worshipful Company of Clothworkers to be awarded to Non-Collegiate Students for proficiency in Physical Science, has been gained by Alexander Scott, educated at the University of Edinburgh. It is of the annual value of 50*l.*, and is tenable for three years.

AN open scholarship in Natural Science, of the yearly value of 90*l.*, tenable for five years, will be competed for at Queen's College, Oxford, on April 25, and following days. Candidates should signify, as early as may be in March, to the Provost, their intention of standing.

THERE are 616 boys now on the school-list at University College School.

WE are glad to see that an influential movement is on foot to form a Bristol and Gloucestershire Archaeological Society. Such a society will have a fertile field for varied work in Gloucestershire, and we have no doubt, from the names which are identified with the movement, that the Society, when formed, will produce valuable results. The inaugural meeting will be held some time during the Easter holidays.

IT is proposed to open a school for field and laboratory instruction in Geology early in July, under the auspices of the Cornell University, at Ithaca, New York. The methods of instruction will be essentially the same as heretofore successfully employed at Penikese, Cleveland, and Peoria in the study of zoology and botany. The first and last quarters of the session will be spent at Ithaca, in laboratory work in connection with frequent lectures. About one-half of the session (second and third quarters) will be devoted to field work, with headquarters in an encampment in a mountainous region chosen for its fitness in illustrating geological structure. Prof. Theo. B. Comstock will have charge of this school. Similar schools with local field work where required are being organised under the direction of the professors in charge of the departments of physics, chemistry, botany, zoology, and free-hand drawing in Cornell University.

THE following College Lectures in the Natural Sciences will be given at Cambridge during the Lent Term:—Gonville and Caius College: On Anatomy and Physiology, by Dr. Bradbury; On Non-Metallic Elements, by Mr. Apjohn.—Christ's College: On the Physiology of the Senses, by Mr. H. N. Martin.—St. John's College: On Elementary Chemistry, by Mr. Main; Instruction in Practical Chemistry will also be given; on Palaeontology (the Annuloids and Annulosa), by Mr. Bonney; on Physical Geography, by Mr. Bonney; on Elementary Geology, by Mr. Bonney.—Trinity College: On Sound and Light, by Mr. Trotter; on Electricity and Magnetism (Elementary Course), by Mr. Trotter; Practical Physiology and Histology, by the Trinity Prelector in Physiology (Dr. Michael Foster).—Sidney Sussex College: On Botany (Vegetable Histology and Physiology), by Mr. Hicks.—Downing College: On Physiology (Papers and Catechetical Lectures, with special reference to the Natural Science Tripos and the Second M.B. Examination), by Dr. Bradbury. On Chemistry (Papers and Catechetical Lectures), by Mr. Lewis.

A LAUDABLE scheme is on foot to unite the local societies of Cumberland into an Association for the Advancement of Science and Literature, having for its objects the spread of culture, mutual assistance in the organising of lecture courses, &c.,

wholesome emulation among the constituent societies in the production of original papers, a yearly union in some town of Cumberland for the reading of original papers and discussion of subjects affecting the scientific and literary welfare of the community, and the publication, at the expense of the Association, of those original papers brought before the various societies which may be considered worthy by the Council.

THE *Iowa Weather Review*, No. 3, gives a brief *résumé* of the weather during each of the six decades of October and November last. Among the more interesting points noted are the occurrence of the Indian summer from the 18th to 24th October; the entire absence of snow or rain from the greater part of the State during November, and a rapid fall of temperature with a N.W. wind on the afternoon of the 28th November, amounting to upwards of 40° in twelve hours. The meteorological year, ending with November, was 3°.8 colder than the average, and Dr. Hinrichs, judging from the sequences of the weather during the past thirty-five years, ventured to predict a mild winter in Iowa. It appears from an examination of cyclones traced over Iowa that electrical phenomena manifest themselves at a considerable distance from the centre of the cyclone, a point of some interest to meteorologists, and deserving of further examination. A table showing the rainfall at sixty-five stations in the state, and another table giving the various meteorological averages at Iowa City during the past four years, complete this very interesting number.

IOWA being the only state in the Union having a meteorological system of its own reporting to a central office and furnishing state reports to the press, it has been resolved to exhibit at the Philadelphia Exhibition specimen schedules, books, postal cards, manuscript weather maps, publications, and diagrams of the climate of the State, in order to show the working of the Iowa Volunteer Weather Stations. It being manifestly beyond the resources even of the munificently supported meteorological system of the United States to undertake the investigation of many important inquiries, other states will probably be induced to follow the example of Iowa when the system there pursued is fully brought under their notice at Philadelphia.

IN a report to the Secretary of the Board of Regents, the erection of a physical observatory at the Iowa State University has been recommended. The detailed drawings on which the estimate of the sum required is based, show that the different storeys of the buildings are to be appropriated to a magnetic observatory, optical observatory and laboratory, self-registering meteorological instruments, and the keeping of records of observation, and a meteorological observatory, while on the roof will be placed a wind-vane, an anemometer, rain and snow gauges, and radiation thermometers.

THE Science and Art Department has issued a Catalogue of Apparatus for instruction in Practical Plane and Descriptive Geometry, Machine Construction and Drawing, Building Construction, Theoretical Mechanics, Applied Mechanics, and Steam, to the purchase of which the aid of 50 per cent. is given.

ACCORDING to letters received from Ternate by Prof. Parlatore, dated September last, from Dr. Beccari, we learn from the *Gardener's Chronicle*, that that adventurous traveller had discovered on Mount Arfak, in New Guinea, a *Balanophora* and an *Araucaria*, besides species of *Vaccinium*, *Rhododendron*, *Podocarpus*, *Umbelliferæ*, and a *Drimys*. We have merely these names to tantalise us, but they suggest a very interesting flora. From the same source we glean the following:—A School of Horticulture has been established at Copenhagen. There will be a national horticultural exhibition at Rome from May 6 to 14, the first of the kind that has taken place in that city.

THE additions to the Zoological Society's Gardens during the past week include three Burrowing Owls (*Pholeoptyrus curicu-*

*laria*) from South America, presented by Mr. A. Q. Lumb; two Golden Pheasants (*Thaumalea picta*) from China, received in exchange; a Tuft-headed Deer (*Lophotragus michianus*) from China, the first living specimen sent to this country, a Chinese Water Deer (*Hydropotes inermis*), five Darwin's Pucras Pheasants (*Pucrasia darwini*) from China, deposited; a Blue-cheeked Barbet (*Megalema asiatica*) from India, purchased.

### SCIENTIFIC SERIALS

*The American Journal of Science and Arts*, January.—This number commences with a paper of "Contributions to Meteorology," in which Prof. Loomis gives results derived from an examination of the United States weather maps and from other sources. Among the points observed are: that periods of unusual cold are generally accompanied by descent of air from the upper regions of the atmosphere, and they are almost quite independent of direction of the wind; that both in summer and winter the force of vapour in Philadelphia is greatest with the wind which brings the highest temperature, and conversely; that the rainfall there shows a diurnal maximum about 6 P.M., and a minimum about 3 A.M.; that in the northern hemisphere storms increase in frequency as we proceed northward as far as latitude 60°, and perhaps somewhat further; and that storms travel with less velocity over the Atlantic (19·6 miles an hour) than over the continents of America and Europe (26 miles an hour). The author compares storm-paths in America and Europe.—Mr. Rowland continues his "Studies on Magnetic Distribution," and one result he arrives at is, that hardening is most useful for short magnets; in very long bars it does not increase the total quantity of magnetism, but only changes the distribution. It would seem that almost the only use in hardening magnets at all is to concentrate the magnetism and reduce the weight.—This paper is followed by a useful summary and comparison of recent researches on Sound by Tyndall, Henry, and Duane.—Prof. Draper endeavours to determine the correction to be applied for effect of temperature on the power of solutions of quinine to rotate polarised light. The presence of sulphuric acid changes the rotation power of the alkaloid by 100°. Quinine used to be given in the form of sulphuric acid solution, and in the recently more popular form of pills or the like, its action is much less, and less certain; this difference being doubtless due to the change of molecular arrangement which is revealed in action of sulphate solutions of the alkaloid on light.—Mr. Allen has a note on extinct wolf and deer species from the lead regions of the Upper Mississippi.

*Poggendorff's Annalen der Physik und Chemie*. Ergänzung-Band vii. Stück 1.—In a paper in this number on the mechanism of magnetic induction, M. Chwolson deals with a phenomenon in production of the magnetic state by external magnetising force, with which theory has seemed to be in discordance. This is the fact, that  $K$ , the so-called magnetisation number (or the ratio of magnetic movement produced to the magnetising force), in the case of small increasing forces, increases at the beginning, reaches a maximum, and with further increase of the force, becomes continuously smaller. This initial increase of  $K$  seemed to contradict the theory of molecular magnets capable of being turned round. M. Chwolson's object is to show that it not only does not contradict it, but is directly deducible from it, and he arrives at this result from a closer study of the processes which, according to Weber's fundamental hypothesis, must occur in a magnetised body, and from a simple assumption as to the origin of molecule-repelling force.—There are three (largely mathematical) papers in this number relating to the mechanical theory of heat; we merely give the titles:—On temperature and *adiabata*, by M. von Oettingen; On the specific heat and true heat capacity of bodies, by M. Herrmann; and On the second principle of the mechanical theory of heat, deduced from the first, by M. Sjilz.—M. Voigt contributes the first portion of a careful investigation of the constants of elasticity of rock salt; he here treats the case of bending.

*Der Naturforscher*, Dec. 1875.—In this number we may note some researches by M. Fleck, of Dresden, which appear to damp recent optimism in reference to salicylic acid as a means of disinfection. He finds that carbolic and salicylic acids may, under certain circumstances, even accelerate fermentation. Benzoic acid is more effective against fermentation, and cinnamic acid still better; but their small solubility in water is against their

use. The antifermentative action of benzoic, carbolic, and salicylic acids is dependent on the quantity of nitrogenous yeast-food; with increase of this the value of their action diminishes. The acids are not specific yeast poisons. Some experiments by MM. Kolbe and Mayer have a similar bearing.—From observations made during the German North Polar Expedition, it is shown by Dr. Hann that the density of the sea-water increases both at the surface and at 900 feet depth, with the latitude, and is in the Polar seas considerably greater than in the Tropics. Hence Dr. Hann concludes that a temperature-compensation of the water of the ocean by unequal proportions of salt does not exist; the heavy Polar water must therefore have a tendency to flow towards the equator.—In an interesting paper on the rate of propagation of excitation in sensitive nerves, M. Bloch shows that the methods for measuring this, which depend on the will of the experimenter (making a signal), are unreliable. He describes an ingenious new method; and he finds the velocity in the spinal cord 194 metres per second, while in the nerves it is only 132 metres per second.—There is an abstract of recent researches by M. Exner, which go to prove, in opposition to M. Edlund, that the supposition of a special power of expansion by the galvanic current in a metallic wire is unwarranted.—We further note some instructive researches by M. Stefan on the comparative power of heat conduction of different gases.

### SOCIETIES AND ACADEMIES

#### LONDON

*Linnean Society*, Feb. 3.—Dr. G. J. Allman, F.R.S., president, in the chair.—William Hillhouse, Prof. E. R. Lankester, Daniel Pigeon, and David Robertson were elected Fellows of the Society. The following were proposed as Foreign members: Dr. Nylander, Professor of Botany, Helsingfors, and J. V. Barboza du Bocage, Direc. Roy. Zool. Mus., Lisbon.—Mr. Algernon Peckover exhibited a case of insects from Madagascar, collected by Mr. Kingdon. Among these Mr. Butler pointed out and made remarks on the scarce and remarkable *Actias Idae* of Felder's "Reise der Novara," the new Hawk-Moth, *Diodosida* sp., allied to a Congo species, also *D. fumosa*, Wallace, the *Danais chrysippus*, L., and its mimic, *Diadema misippus*, L., likewise a Homopterous genus allied to *Cosmoscarta*, of Stål.—Mr. Henry Trimen read a note on *Baea commersonii*, R.Br. He observed that the supposition of Commerson having obtained the type at Magellan Straits is founded on an error; Mr. Rob. Brown regarded it as belonging to the Seychelles. Mr. C. Walter has quite lately discovered specimens growing on coral cliffs in the Duke of York's Island, which, through the Baron von Müller, of Melbourne, have been forwarded to this country for identification. The probability is that Commerson himself obtained his examples in 1768 from the same locality; its true habitat afterwards having been confounded from the name "Praslin," attached to the original specimen, being given to widely different places.—Mr. Bowdler Sharpe read a paper on the geographical distribution of the vultures (Vulturidae). These he divides into two sub-families Vulturinae, with six genera, and Sarcorhamphinae, with four genera, the distinctive characters and geographical range of which were commented on. The author likewise sketched out the classification of the birds of prey, as proposed by him in recent publications.—A short paper on New British Lichens, by the Rev. W. A. Leighton, was taken as read; in this six new species are described and figured.—The Rev. J. M. Crombie made some observations on two communications laid by him before the Society, viz., (1) *Lichenes capenses*, being an enumeration of the lichens collected at the Cape of Good Hope, by the Rev. A. E. Eaton, during the Venus Transit Expedition in 1874. (2) *Lichenes Kergueleni*, being an enumeration of the lichens collected in Kerguelen Land by the Rev. A. E. Eaton during the Venus Transit Expedition in 1874-5.

*Mathematical Society*, Feb. 10.—Prof. H. J. S. Smith, F.R.S., president, in the chair.—Messrs. A. Cockshott and R. T. Wright were proposed for election. The Secretary communicated a paper by Prof. Wolstenholme: Loci connected with the rectangular hyperbola, being inverse, with respect to its centres and vertices. Mr. Cotterill spoke upon the subject, referring to authors who had also treated of the loci in question.—Mr. W. Spottiswoode, F.R.S., read a paper on determinants of alternate numbers. The paper was founded on some unpublished notes on determinants and other functions of these numbers, communicated to the author by Prof. Clifford.—Mr.